

6. The method of claim 1 further comprising the step of switching an in-progress time sensitive communication from the second type communication path to the first type communication path if the quality of

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transmission over the first type communication path is acceptable.

7. The method of claim 6 wherein said first type communication path is a internet protocol network and said second type communication path is a circuit-switched network.

8. The method of claim 1 further comprising determining the importance of a plurality of time sensitive communications and prioritizing switching of the time sensitive communication from the first type communication path to the second type communication path based on the determined importance of the time sensitive communication.

9. The method of claim 8 wherein said step of switching comprises switching time sensitive communications determined to be more important to the second type communication path before less important time sensitive communications are switched.

10. The method of claim 9 further comprising reserving a certain amount of communication conduits of the second type communication path for selected higher importance time sensitive communications.

11. The method of claim 10 wherein said time sensitive communications are telephone calls.

1. The first step is to identify the problem. This involves understanding the current situation and what needs to be changed.

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19. The method of claim 18 wherein said first type communication path is a packet network and said second type communication path is a circuit-switched network.

20. The method of claim 19 wherein said packet network is an internet protocol network.

21. The method of claim 18 wherein the first and second type network are packet networks.

22. The method of claim 17 wherein said time sensitive communication includes voice data.

23. The method of claim 22 wherein said time sensitive communication is a telephone call.

24. The method of claim 18 wherein said step of evaluating comprises evaluating the transmission of data packets across the first type communication path to determine if the quality of transmission is acceptable.

25. The method of claim 24 wherein data packet delay is evaluated.

26. The method of claim 25 wherein data packet loss is evaluated.

27. A computer readable medium, used in evaluating data communication routing paths for use in routing time sensitive communications over the paths, including instructions which when executed by a computer system, perform the steps of:

evaluating whether the quality of data transmission over a first type communication path is acceptable; and switching an in-progress time sensitive communication from the first type communication path to a second type communication path if the quality of data transmission is not acceptable.

28. The medium of claim 27 wherein said step of switching comprises switching said time sensitive communication from an internet network to a circuit switched telephone network.

29. A computer readable medium, used in evaluating data communication routing paths for use in routing time sensitive communications over the paths, including instructions which when executed by a computer system, perform the steps of:

evaluating whether the quality of data transmission over a first type communication path is acceptable; and switching an in-progress time sensitive communication from a second type communication path to the first type communication path if the quality of transmission over the first type communication path is acceptable.

30. The medium of claim 29, wherein said time sensitive communication is switched from a circuit-switched network to an internet protocol network.

31. A computer-implemented method of evaluating data communication routing paths for use in routing time sensitive communications over the paths, comprising the steps of:

5 evaluating the quality of data transmission over a first type communication path; and

10 switching an in-progress time sensitive communication back and forth between the first type communication path and a second type communication path based on the quality of service of the first type communication path.

15 32. The method of claim 31 wherein said step of switching comprises switching said time sensitive communication back and forth between an internet network and a circuit switched telephone network.

33. The method of claim 32 wherein the quality of transmission of the internet network is evaluated for an acceptable quality for voice transmission.

20 34. The method of claim 33 comprising transmitting voice communication over the internet network when the quality of data transmission is acceptable, and transmitting the voice communication over the circuit switched network when the quality of transmission is not acceptable.

38. The method of claim 31 wherein said determining step comprises measuring data packet delay along said first type telephone call transmission path.

39. The method of claim 38 wherein said determining step comprises measuring data packet loss along said first type telephone call transmission path.

40. The method of claim 37 wherein said determining step comprises measuring data packet loss along said first type telephone call transmission path.

41. The method of claim 35 wherein said switching step comprises switching said existing telephone call from a circuit switched telephone call path to an internet protocol telephone call path.

42. The method of claim 35 further comprising the step of switching a telephone call that has been switched from said second type telephone call transmission path to said first type telephone call transmission path back to said second type telephone transmission call path when the quality of service along said first telephone call transmission path does not meet predetermined criteria.

43. The method of claim 42 wherein said first telephone call path is an Internet Protocol path and wherein said second type telephone call transmission path is a circuit switched telephone call path.

44. The method of claim 42 further comprising determining the number of telephone call lines available for switching telephone calls from said first type telephone call transmission path to said second type

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telephone path and switching only said number of calls from said first type telephone transmission call path to said second type telephone call transmission path.

45. The method of claim 44 further comprising prioritizing switching of telephone calls from said second type telephone call transmission path to said first type telephone call transmission path based on call switching criteria.

46. The method of claim 45 wherein said call switching criteria is based a telephone number associated with the calling or called party telephone line.

47. The method of claim 46 wherein certain telephone numbers are designated as higher priority telephone numbers for use in prioritizing said switching.

48. A computer-implemented method of evaluating telephone call routing paths for use in routing a telephone call, comprising:

determining whether the quality of telephone call transmissions along a first type telephone call transmission path meets preselected criteria; and

automatically switching an existing telephone call from the first telephone call transmission path to a second telephone call transmission path when the quality of service along the first type telephone call transmission path does not meet the preselected criteria.

49. A system for evaluating telephone call routing paths for use in routing a telephone call, comprising:

5 a processor operative to determine whether a voice communication occurring between a first location and a second location should be switched to either a first type of voice communication path or a second type communication path based on predetermined threshold values for the voice communication; and

10 a switch for switching the voice communication to either the first or second type voice communication path based on the predetermined threshold values.

50. The system of claim 49 wherein said processor is operative to initiate switching said voice communication from said first type communication path to
15 said second type communication path and wherein said processor is operative to initiate switching said voice communication from said second type communication path to said first type communication path.

51. The system of claim 50 wherein said first type
20 communication path is an internet protocol based network and said second type communication path is a circuit switched communication path.

52. A system for evaluating data communication routing paths for use in routing time sensitive
25 communications over the paths, comprising:

a processing unit that evaluates the quality of data transmission over a first type communication path; and

switch that switches an in-progress time sensitive communication back and forth between the first type communication path and a second type communication path based on the quality of service of the first type communication path.

53. The system of claim 52 wherein said switch switches said time sensitive communication back and forth between an internet network and a circuit switched telephone network.

54. The system of claim 53 wherein the evaluator unit evaluates the quality of transmission of the internet network for an acceptable quality for voice transmission.

55. The system of claim 54 wherein the switch transmits voice communication over the internet network when the quality of data transmission is acceptable, and transmits the voice communication over the circuit switched network when the quality of transmission is not acceptable.

56. The system of claim 55 wherein the first and second type networks are packet networks.

57. A method for switching between data transports paths for routing data, comprising the steps of:

receiving an indication of the quality of data transmission over a first type communication path; and transmitting a signal that causes an in-progress time sensitive communication to be switched back and forth between the first type communication path and a second type communication path based on the quality of service of the first type communication path.

58. The method of claim 57 wherein the first type communication path is an internet network and the second type communication path is a circuit switched telephone network.

59. A method for switching between data transports
paths for routing data, comprising the steps of:

receiving a signal that causes an in-progress time sensitive communication to be switched back and forth between the first type communication path and a second type communication path based on the quality of service of the first type communication path; and

relaying the signal to a switch that causes an in-progress time sensitive communication to be switched back and forth between the first type communication path and a second type communication path based on the quality of service of the first type communication path.

60. The method of claim 59 wherein the first type communication path is an internet network and the second

type communication path is a circuit switched telephone network.

61. An apparatus for evaluating data communication routing paths for use in routing time sensitive communications over the paths, comprising:

means for evaluating the quality of data transmission over a first type communication path; and

means for switching an in-progress time sensitive communication back and forth between the first type communication path and a second type communication path based on the quality of service of the first type communication path.

62. The apparatus of claim 61 wherein said means for switching comprises switching said time sensitive communication back and forth between an internet network and a circuit switched telephone network.

63. An apparatus for evaluating data communication routing paths for use in routing time sensitive communications over the paths, comprising:

means for evaluating whether the quality of data transmission over a first type communication path is acceptable; and

means for switching an in-progress time sensitive communication from the first type communication path to a

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second type communication path if the quality of transmission is not acceptable.

64. The apparatus of claim 63 wherein said step of switching comprises switching said time sensitive communication from an internet network to a circuit switched telephone network.

65. An apparatus for evaluating data communication routing paths for use in routing time sensitive data over the paths, comprising:

means for evaluating whether the quality of data transmission over a first type communication path is acceptable; and

means for switching an in-progress time sensitive communication from a second type communication path to the first type communication path if the quality of transmission over the first type communication path is acceptable.

66. The apparatus of claim 65 wherein said step of switching comprises switching said time sensitive communication from an internet network to a circuit switched telephone network.